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NOTES ON THE CULTIVATED LULO

BY

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ONE of the most delicious of those cultivated fruits peculiar to the northern Andes is the *lulo* or *naranjillo*. This fruit is very common from Perú and Ecuador to northern Colombia and Venezuela. Its area of greatest production centers probably in Ecuador and southern Colombia.

In spite of the fact that a number of articles on this economic fruit have recently appeared (Pérez-Arbeláez, "Plantas medicinales y venenosas de Colombia" (1937) 246; Chalons in Agric. Amer. 4 (1944) 110-112; McCann, *ibid.* 7 (1947) 146-149; Hodge in Rev. Fac. Nac. Agron. 7 (1947) 147-154; Hodge in Journ. N.Y. Bot. Gard. 48 (1947) 155-159; Pérez-Arbeláez, "Plantas útiles de Colombia" (1947) 451), little of a detailed nature has been known about the taxonomy of the source-plant. Although it has been generally accepted that the lulo represented *Solanum quitoense*, there is sufficient variation between the lulo plants from different parts of Colombia to raise some doubt that only one species is

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involved (Schultes in Bot. Mus. Leaflet. Harvard Univ. 14 (1949) 45, t. 10).

We have recently attempted to study the numerous specimens of lulo now available. Although many more field observations and much more material from a wider area are greatly to be desired, we believe that our studies have led to at least a preliminary clarification of the problem. It is merely as a preliminary contribution that we offer the following notes.

Both of us have seen the lulo under cultivation in the field. Our experience and field notes are in complete agreement with the results of our study of the available herbarium material.

We wish to thank the Directors of the following botanical institutions for their kindness in allowing us to consult the material entrusted to their care: Gray Herbarium, Arnold Arboretum, Economic Herbarium of Oakes Ames (Harvard University); Chicago Natural History Museum; National Arboretum Herbarium (Beltsville, Maryland); U. S. National Herbarium (Washington, D.C.); Royal Botanic Gardens (Kew); British Museum (Natural History) (London); Musée d'Histoire Naturelle (Paris); Jardin Botanique de l'Etat (Brussels); Jardin Botanique (Geneva); and the Jardín Botánico (Madrid).

The two concepts which are involved may be distinguished by the character in this key.

- I. Planta perfecte inermis. Peruvia, Ecuadore, Colombia meridionali.

Solanum quitoense

- II. Planta ramulis, petiolis, nervisque variabiliter armata, Colombia centrali et septentrionali.

Solanum quitoense var. *septentrionale*

***Solanum quitoense* Lamarck** Illustr. 2 (1797) 16.

Solanum angulatum Ruiz & Pavón Fl. Peruv. 2 (1799) 36, t. 170, fig. a.

Solanum quitense Humboldt, Bonpland & Kunth Nov. Gen. et Sp. 3 (1818) 25.

COLOMBIA: No definite locality. 1842, *Sinclair s.n.*—Comisaría del Putumayo. Valley of Sibundoy, Sibundoy. Alt. about 2225–2300 m. February 16, 1942, *R. E. Schultes 3271*.—Same locality. “Large shrub. Stem and under surface of leaf purplish, hairy. Flowers white, anthers yellow. Fruit orange coloured and size of oranges. *Naranjillo*. Kamsá Indian name: *ma-sha-kve*.” May 29, 1946, *R. E. Schultes & M. Villarreal 7616*.

ECUADOR: No definite locality. “Nuqui.” January 1848, *Seemann s.n.*—Guayaquil. [Cultivated from seed collected in Chimbo.] November 27, 1897, *J. V. S. Muller s.n.*—Vicinity of Huigra, “mostly on the Hacienda de Licay.” August 1918, *J. N. Rose & G. Rose 22398*.—Garden in Otavalo. Alt. 8500 feet. February 20, 1921, *W. Popenoe 1266*.—Baños, Tungurahua. Alt. 6500 feet. March 6, 1921, *W. Popenoe 1267*.—Provincia de Tungurahua, Valley of Pastaza River. Between Baños and Cashurco. Alt. 1300–1800 m. September 25, 1923, *A. S. Hitchcock 21787*.—Provincia de Tungurahua, between Hacienda San Francisco and Río Margaritas, alt. 1225 m. March 20, 1939, *C. W. Penland & R. H. Summers 168*.—Provincia de Pichincha, Valley of Río Saloya, Los Paysanes. Alt. 1400 m. June 28, 1939, *E. Asplund 7298*.—Provincia de Imbabura, above García Morena. “Common at edges of clearings. Alt. 4200 feet. Suffrutescent herb, to 2 meters. Corollas whitish to pale magenta. *Naranjilla*.” August 9, 1944, *W. B. Drew E-531*.

PERU: “38. 786—*Solanum*. Planta culta in Hort. Oppido la Magdalena. *Solanum*.” No collector, no date. [Possibly same collection as following.]—“Ex oppida La Magdalena in Peruvia. Habitat in Limae hortic. Floret. Jun. Julio, Anoto et Sept. Fructus valde odorus. Vulgo *Naranjas de Quito*. Naturales Limae exprimunt aliquot gutas huju fructu in potum (vulgo *maté*) protectorem sauem. Vulgo *Naranjitas de Quito*.” August 1782, *H. Ruiz & Pavón s.n.*—“Lima Hort.” 1778, *H. Ruiz & Pavón s.n.*—“Maynas,” 1831. *Poeppig 2222*.—“Chacapoyas, Perú.” No date. *Matthews s.n.*

COUNTRY UNKNOWN: “Ex hb. de Jussieu No. 6458.”—“Ex hb. Lamark.”—“Ex hb. De Candolle.” [Apparently a Pavón specimen.]

***Solanum quitoense* Lamarck var. *septentrionale*
R. E. Schultes & *J. Cuatrecasas* var. *nov.***

Haec varietas a *Solano quitoensi* principaliter ramis, petiolis foliorum superficiebus superioribus et inferioribus in nervis spinosis spinulosisque differt.

COLOMBIA: Departamento de Antioquia, no date, *Jervisse* sn.—Departamento del Tolima, Ibagué. 1844. *J. Goudot* s.n.—Departamento del Valle de Cauca, La Paila, April 1853, *Holton* 23.—Departamento Norte de Santander, near Ocaña. "Bush, open spaces. Alt. 8,500'. Shrub or small tree, 10–19', slender growth stems with thorns; flowers whitish, calyx and leaf with long, dark violet velvet, latter $1\frac{1}{2}$ –2' broad and $2\frac{1}{2}$ –3' long; fruit yellow with prickles, plum-shaped, edible, sour." January 1878, *Kalbreyer* 543.—Departamento de Santa Marta, [Santa Marta mountain], alt. 6,000 ft. January 1903, *H. H. Smith* 1853.—Departamento de Cundinamarca, cercanías de San Bernardo hacia Sasaima, alt. 1600–1800 m. "Matotales y cafetales. Gran hierba de tallo grueso y aquifolioso; cálices algo violáceos, corola blanca o blanco-violácea." June 23, 1940, *J. Cuatrecasas* 9604.—Departamento de Antioquia, Itaquí, July 1944, *Br. Daniel* 3352.—Departamento de Antioquia, alrededores de Medellín, Río Negro, alt. 1,560 m. "Lulo. Cultivated," February 11, 1946, *W. H. Hodge* 6712.—Departamento del Valle, Cordillera Occidental, vertiente oriental, Quebrada del Tigre, Quebradita de Pultabrava, alt. 1,440 m. "Hierba muy robusta, 1 m. alt. Hoja blanda rigida, verde oscura haz, violeta envés. Hoja tierna violeta, ramos id. Cáliz violeta. Corola blanca o blanco-violácea. Anteras amarillas. Fruto 5 cm. diámetro." October 28, 1946, *J. Cuatrecasas* 22694.—Departamento del Valle, Cordillera Occidental, vertiente occidental, hoyo del Río Digua, Río San Juan, abajo de Queremal a la derecha del río entre km. 52 y 53, alt. 1,300–1,500 m. "Hierba robusta. Hoja muy blanda, envés y peciolo violeta. Haz verde, oscuro. Cáliz violeta claro. Corola exteriormente violeta claro, interiormente blanca. Anteras amarillo claras. Fruto maduro amarillento, sabroso—5 cm. diám., hirsuto. Lulo morado." March 19, 1947, *J. Cuatrecasas* 23853.—Departamento del Valle, Cordillera Occidental, vertiente occidental, hoyo del Río Digua, lado derecho, entre Queremal y La Elsa, alt. 1,200–1,160 m. "Hierba robusta, 1 m. o más. Hoja verde oscura haz, verde clara envés. Peciolo verde pálido (verdoso blanquecino). Cáliz verdoso blanquecino. Corola blanca con ligero tono lila. Anteras amarillas. Frutos amarillos-anaranjados (maduros), 4.5 cm. diám., cubiertos de pelusa patente y punzante. Pulpa acidula, muy sabrosa. Lulo." March 27, 1947, *J. Cuatrecasas* 23992.—Departamento del Valle, Cordillera Occidental, vertiente occidental, hoyo del Río Digua, lado izquierdo, Piedra

de Moler. Bosques, 1050 m. alt. "Hierba muy robusta y ramificada. Hojas blanquecinas. Corola blanca. Anteras amarillas. Bayas 4 cm. diám., amarillo-anaranjadas, erizadas. *Lulo de perro*." August 19-28, 1943, *J. Cuatrecasas 15031*.

ECUADOR: "Ad radices M. Chimborazo, alt. 2,300'. Suffrutex 5-pedalis." June 1860, *R. Spruce s.n.*

VENEZUELA: Colonia Tovar, 1854-55, *A. Fendler 1001*.—Same locality and date, *A. Fendler 1002*.—Same locality and date, *W. Sonder s.n.*—Caracas, neighborhood of Guaranas. Alt. 3,000 ft. "Flowers blue, fruit without prickles, small, veined, tall shrubby plants." December 1854, *Birschel s.n. (K)*.—"Habitat ad Orinocum, prope Carichana." No collector, no date [ex "hb. Bonpland"].

Our studies lead us to the conclusion that typical *Solanum quitoense* is confined to the southern part of the range of the species complex and occurs in Perú, Ecuador (where it appears to be most abundant) and southern Colombia. This concept is easily recognized because it is completely devoid of spines along the branches, petioles and veins. It is deeply significant, we feel, that all of the collections from this southern periphery, with one exception, have not the slightest trace of spines. In other respects (such as color and density of indumentum on the leaves) they are also rather homogeneous. The collection *Spruce s.n.*, from the base of Mt. Chimborazo, is the single exception; it has slight and very remote spines, and the Kew specimen is annotated as representing one of the types of *Solanum*, the fruit of which is gathered for food in Ecuador. It may well represent a distinct variant, but paucity of material precludes a more precise disposition.

Herbarium material from the northern periphery—most of Colombia and part of Venezuela—is, without a single exception, spiny. There is tremendous variation in the abundance and size of the spines which are borne along the branches, on the petioles and along the nerves of the upper and lower surface of the leaves. Some speci-

mens have very small and remotely placed spinules; the other extreme has stout spines up to 10 or 12 mm. in length. *Cuatrecasas* 23992, from the Río Digua, is almost devoid of spines, whereas *Cuatrecasas* 15031, from the same area, is well armed on the petioles and leaves with spines up to more than 1 cm. in length. *Hodge* 6712, from Antioquia, has remote but strong spines along the petioles and the midrib and, occasionally, even on the tertiary veins. The collection *Cuatrecasas* 9604, from Cundinamarca, has stouter spines, even on the upper surface of the leaves. If we can judge from the admittedly limited material at hand, we may suggest that there is evident a perceptible increase in density and size of spines as one proceeds northwards. Some of the material from Cauca is only weakly armed; the stoutest armature is found on specimens from the central and northern Andes of Colombia and Venezuela. Collections from intermediate regions, such as *Cuatrecasas* 22694, from the Departamento del Valle, would seem to be links between *Solanum quitoense* and its var. *septentrionale*.

The recognized fact that the density and size of the spines vary so much does not, we feel, argue against the separation as a distinct variety of the spiny from the unarmed variants. The genus *Solanum* tends to be extremely variable in respect to spines *where they occur*. There is a very distinct possibility that, when ample material is available for study and when adequate field studies have been carried out, the variation in color and density of the soft indumentum of the leaves may also be found to be sufficiently important to use in the recognition of additional varieties. However, we cannot, at the present state of our knowledge, evaluate the characters which may reside in the differences of leaf pilosity in the *Solanum quitoense* complex.

We have chosen the varietal epithet *septentrionale* to

indicate our belief that the spiny material represents a northern variant of *Solanum quitoense*.

In the Mutis collection of water-colors of Colombian plants, executed between 1783 and 1808 and preserved in the Jardín Botánico in Madrid, the two concepts *Solanum quitoense* and *S. quitoense* var. *septrionale* are clearly distinguishable. Plate 38 in volume 19 consists of two double-sized black and white sheets, one depicting a flowering branch with a floral dissection, one with a fruiting stem and a dissected fruit; this is the spineless *Solanum quitoense*. Plate 39, representing *Solanum quitoense* var. *septrionale*, has one sheet showing, in colors, a leafy branch in flower and one piece of stem in fruit; the stems, petioles and veins on the under surface of the leaf are armed with heavy spines and the flowers are larger than those shown in plate 38.

There is a large colored plate of *Solanum quitoense* (C. M. Curtis del.) in the De Candolle herbarium in Geneva. It is annotated as follows: "*Solanum angulatum*. Imported from Peru in 1824, by Robert Barclay. Bury Hill"; and in De Candolle's hand: "Gravure donnée par M. Barclay. Ne fait partie d'aucun ouvrage. A.DC. 1839."

The most extensive field notes found on an herbarium collection are preserved on the specimen of *J. V. Sigvald Muller s.n.* at Kew. Because of their completeness, we hereby publish them almost in full:

. . . the plant is, as you no doubt know, a climber, the fruit bright orange, nearly round or spheroid, about $1\frac{3}{4}$ inch to 2 inches in diameter. The pulp is bright green, very juicy and very aromatic. The seeds are mixed with the pulp when ripe The seeds are fixed to a softer body, than what I describe as solid white, but this solid part gets broken up in the pulp (and is eaten as well) when the pulp is squeezed out. The pulp looks like the pulp from green gooseberries; it is eaten with a little sugar. Is exceedingly pleasant and cooling. With cream it must be a delicious dish. The sugar is mixed with the pulp to taste. The pulp alone is not more acid than to make it pleas-

EXPLANATION OF THE ILLUSTRATION

PLATE XVII. Flower and young fruit of the type
plant of *Solanum quitoense* var. *septrionale*.

Photograph by J. CUATRECASAS



ant, even without sugar, which is a costly luxury in the Andean Valley. Large quantities come down to Guayaquil where they are rather expensive, as the mule transport over the Cordilleras is long and tends towards ruining the delicate fruit. Of late the pulp, strained from the seeds and added to water, is used for ice-making. The flavour is excellent and was quite new to me. Hence, I went into the market, and went into the question what fruit it was. I was told by the English people, that it was a guava (there are many varieties here), but that could not be.

Ruiz, who encountered *Solanum quitoense* in Perú in 1777, wrote of it (under the synonym *S. angulosum*) “. . . . Narangitas de Quito, por haber sido transplantado de esta Provincia, y tener sus frutos la figura y color de una Naranja pequeña; las mugeres estiman estos frutos por su olorcillo y por el gusto particular que dá á la bebida del Mate, en la que acostumbran echar algunas gotas de su xugo; tambien los ponen entre las mixturas de flores para que hermosée y contribuya con su olor á hacer mas grata la mixtura” (Ruiz, H.: “Relación histórica del viage a los Reynos del Perú y Chile” Jaramillo-Aranjo ed. (1952) 30).

PLANTAE COLOMBIANAE XIV
RHYTIDANTHERAE MONTIS MACARENAE NOVA SPECIES
BY
RICHARD EVANS SCHULTES¹

RECENT collections of plants from the northern part of the Cordillera de La Macarena in the Intendencia del Meta, Colombia, have been replete with extraordinary novelties and endemics. One of the most outstanding of these plants is a hitherto undescribed species of the ochraceous genus *Rhytidanthera*. Because of its unusual size and beauty, it may be named

***Rhytidanthera regalis* R. E. Schultes sp. nov.**

Arbor magna usque ad septuaginta pedes alta, frondosissima, aspectu nobilis. Truncus columnaris, basi saepissime aliquid arcuatus, usque ad duo pedes in diametro, rufo-brunneo cum cortice subruguloso et minute lenticellato; ligno duro, albido. Folia imparipinnata, conspicue pendula; petioli 20–30 cm. longi, basi usque ad 2 mm. in diametro; foliola plerumque tredecim (cum petiolis 4–6 mm. longis), lateralia alterna, 3–4.5 cm. distantia, lanceolata, apice acuto-acuminata, basi late cuneata vel subrotundata, 15–22 cm. longa, 3–5.5 cm. lata; foliolum terminale liberum, perfecte lanceolatum, apice

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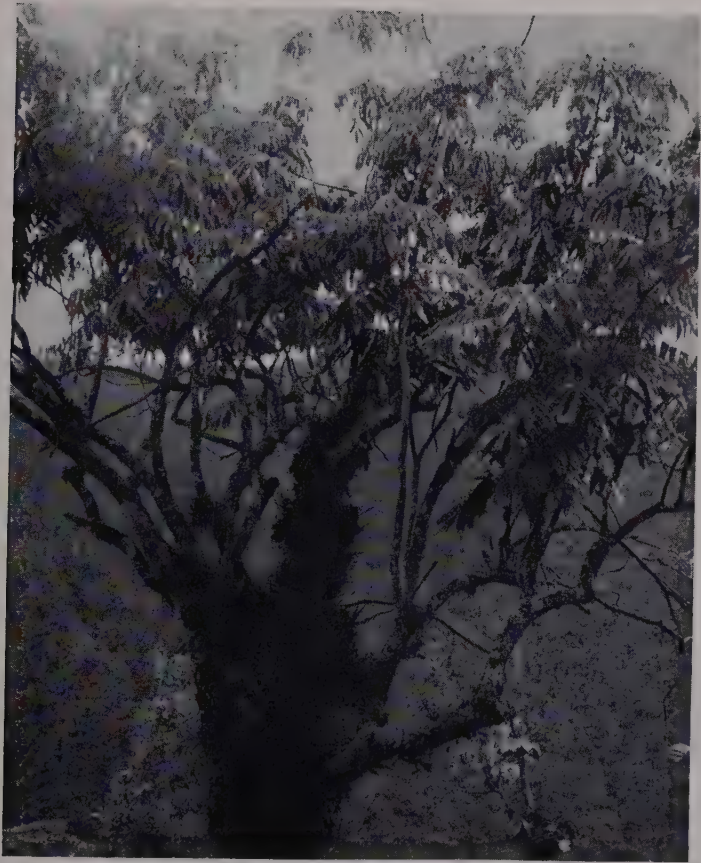
sensim acuminatum, basi cuneatum, usque ad 15.5 cm. longum, 3–3.5 cm. latum; alia marginem versus vix retrocurvata, margine grossiuscule serrata, dentibus apice paulo incurvis et plerumque 5–8 mm. distantibus, supra nitida venis non elevatis, subtus pallidiora, venis prominenter elevatis, secundariis plusminusve viginti quinque ad triginta; stipulis caducis. Inflorescentiae terminales, longae, quam folia paulo breviores, usque ad 20 cm. longae, rhachide 2–3 mm. in diametro, pauciflorae (floribus usque ad viginti); rhachide rami usque ad 10 cm. longi; pedicelli ad rhachidem articulati, robustiores lignosique, usque ad 10–12 mm. longi, apice subclavati, basi 1.5 et apice 2.5 mm. in diametro. Flores solitarii, aromatico-fragrantes, mucilaginosi, alabastris comparate parvis, usque ad 15 mm. longis, 6 mm. in diametro. Sepala quinque, imbricata, concava; duo exteriora subcoriacea sed marginem versus aliquid membranacea, late rotundata, margine subintegra, apice retuso-incisa, supra minutissime pulverulento-substriolata (non strigillosa), plusminusve 7 mm. longa, 12 mm. lata, basi cum plusminusve quattuor ad sex glandulis minutis digitaliformibus, usque ad 1.5 mm. longis, 0.25 mm. in diametro; interiora majora, membranacea vel apicem versus aliquid papyracea, concava, rotundata vel late oblonga, apice rotundata, margine irregulariter sublacerata, 11 mm. longa, 15 mm. lata. Petala quinque, alba, membranacea, leviter inaequalia, oblonga (30 mm. \times 15 mm.) vel oblongo-spathulata (30 mm. \times apice 10 mm.) apice leviter fissa, margine integra. Stamina viginti octo ad triginti duo, brunneo-flava, subaequalia, usque ad 12 mm. longa. Antherae 10 mm. longae, 0.8 mm. latae, longitudinaliter rugulosae, filamentis 2 mm. longis, basi 0.7 mm. latis. Ovarium crassum, nigrum, inverse claviforme, apicem versus in stylum indeterminatum, erectum, luteum, paulatim attenuatum, usque ad 15 mm. longum, 2.5

EXPLANATION OF THE ILLUSTRATION

PLATE XVIII. RHYTIDANTHERA REGALIS *R. E. Schultes*. Characteristic habitat on steep slopes or edges of cliffs. Macizo Renjifo, northwestern part of the Cordillera de La Macarena.

Photograph by R. E. SCHULTES

PLATE XVIII



mm. in diametro, quinque cum stigmatibus sessilibus. Capsulae usque ad 3.5–4 cm. longae, 0.5 cm. in diametro, apicem versus anguste falcatae.

Largest of the five known species of this endemic Colombian genus, *Rhytidanthera regalis* appears to be somewhat intermediate between *R. splendida* and *R. magnifica*. In addition to marked differences in the leaves, *Rhytidanthera regalis* can be distinguished from all other species in the important character of the number of stamens. *Rhytidanthera splendida* has 18–20 stamens; *R. magnifica* 40–50; *R. sulcata*, about 50; *R. mellifera*, 64; whereas *R. regalis* has 28–32. The fruit of *Rhytidanthera regalis* resembles in its size that of *R. sulcata*, but the latter is a small shrub; the margin of its leaflets is doubly serrate and its inflorescences are longer than the leaves. From *Rhytidanthera mellifera*, the new species differs strikingly in shape, size, and consistency of the leaves and in several important floral characters. Worthy of note is the presence in *Rhytidanthera regalis* (sometimes on the same flower) of both obovate-spatulate and oblong-rotund petals, although the great majority are oblong-rotund; this is, apparently, an unusual condition, for Dwyer (in *Lloydia* 9 (1946) 51) employs the difference in petal shape as the major character in his key to the species.

Rhytidanthera regalis is the second surprise which this genus—the only compound-leaved one in the *Ochnaceae*—has given us in the last decade. For one hundred years, *Rhytidanthera* has been known, although until 1904 it was not recognized as distinct from *Godoya*. In this century, only three species, all from Colombia (Santander, Magdalena and Boyacá), were collected (cf. Dwyer loc. cit. 50–54). This genus, native to the northern parts of the eastern Cordillera of Colombia, constituted then an extremely restricted endemic.

In 1943, *Rhytidanthera mellifera* was discovered on ancient (Cretaceous) sandstone hills in the Amazonian drainage of Colombia—a significant range extension. Although still confined within the boundaries of Colombia, *Rhytidanthera* had been located in the great Amazonian area, astonishingly distant from the eastern Cordillera. Furthermore, since the isolated sandstone hills of the Vaupés and Caquetá (where *Rhytidanthera mellifera* was collected) are remnant outliers of a once more or less continuous land-mass the core of which lies in southern Venezuela and British Guiana, the possibility of the discovery in the future of *Rhytidanthera* far to the east was open to suggestion. This curious distribution of *Rhytidanthera* was accepted (Schultes in Bot. Mus. Leaflet. Harvard Univ. 14 (1949) 34) as evidence for believing in an ancient migration or flow of Andean elements eastward over the old Venezuelan-Guianan land-mass.

The collection in the Macarena Mountains of *Rhytidanthera regalis* stands out as one of the most significant phytogeographical discoveries of the last two decades. Both morphologically and geographically intermediate between the western species and the Amazonian *Rhytidanthera mellifera*, the Macarena species provides us with an unexcelled “missing link.”

COLOMBIA: Intendencia del Meta, Cordillera La Macarena (extremo nordeste), Macizo Renjifo, faldas orientales. Alt. 600–1300 m. “Tree 60 ft. tall. Crown heavy. Flowers white, anthers yellow.” December 30, 1950–January 5, 1951. *Jesús M. Idrobo & Richard Evans Schultes 871* (TYPE in Herb. Gray; DUPLICATE TYPE in Herb. Nac. Colomb.).—Intendencia del Meta, Sierra de La Macarena, Central Mountains, North Ridge. Alt. 1500 m. “Dense forest. Tree up to 15 m. high. Petals white ephemeral, stamens yellow, inclined to lower side of flower.” December 30, 1949, *W. R. Philipson & J. M. Idrobo 2011*.—Intendencia del Meta, Cordillera La Macarena (extremo nordeste), Macizo Renjifo, faldas orientales. Alt. 600–1300 m. “Tree growing on steep, rocky slopes. Height 60–70 feet. Diameter at base 20 inches. Bark dark reddish brown, slightly rough. Wood very hard. Usually somewhat gnarled. Fruit green.” December 30,

1950—January 5, 1951, *Jesús M. Idrobo & Richard Evans Schultes 852*.
—Same locality and date. "Tree 50 ft. tall, very extensive crown. Branches gnarled. Fruits green." *Jesús M. Idrobo & Richard Evans Schultes 860*.—Same locality and date. "Flowers white. Tree 65 feet tall." *Jesús M. Idrobo & Richard Evans Schultes 869*.—Same locality. "Al borde de un peñasco. Árbol de 20 m., tortuoso. Tronco de 2 pies de diámetro. Flores blancas." January 22, 1951, *Jesús M. Idrobo & Richard Evans Schultes 1188*.—Intendencia del Meta, Cordillera La Macarena, Mesa del Río Sansa. Alt. ca. 1000–1300 m. "Tree about 50 ft. tall, inclined over cliff." January 23, 1951, *Jesús M. Idrobo & Richard Evans Schultes 1300*.

A NEW SAURAUIA FROM MEXICO

BY

RICHARD EVANS SCHULTES

Saurauia Comitiss-Rossei *R. E. Schultes sp. nov.*

Arbor robusta ut videtur. Rami scabrido-hirsuti sed denique subglabrescentes, fulvo cum cortice. Foliorum lamina petiolata, valde coriacea, obovata, apice acuta, basi rotundata, minutissime serrulata, supra atroviridis et muriculata et sparsissime setoso-pilosa, infra velutina et densissime pilosa albo-canis cum pilis atque cum pilorum floccis in nervorum axillis, nervis plusminusve tres et viginti parallelis, 15–18 cm. longa, 5.5–6 cm. lata. Inflorescentia comparate pauciflora, foliis brevior, cum pedunculo 10–15 cm. longa; pedunculus dense adpresso-hirsutus vel setoso-pilosus; pedicelli robusti, hirsuto-pilosiusculi, 4 mm. longi; bracteae conspicuae, lineares, setoso-pilosae, usque ad 1 cm. longae. Flores 1.8 cm. in diametro, albi. Sepala quinque, in maturitate sicca atque persistentia, obovata vel subrotundata, 6 mm. longa, 4 mm. lata, extus scabridule et minute setoso-pilosiuscula, margine minutissime ciliata. Petala quinque, fere usque ad basim libera, glabra, membranacea, late et subquadrangulateque rotundato-ovata, 8 mm. longa, 5 mm. lata. Stamina plusminusve viginti, corollae basi adhaerentia, basi setoso-barbata. Staminum filamenta 3–4 mm. longa; antherae versatiles. Ovarium globosum, quinque-partitum, glabrum, quinque cum stylis carnosis minutisque.

Fructus niger, 3 mm. longus, baccatus, quinque-carpellatus.

Saurauia Comitis-Rossei appears to have no close allies among the known species of Mexico and adjacent parts of Middle America. It is easily distinguished by its extremely thick and coriaceous leaves, as well as by a number of less conspicuous vegetative and floral characters.

The common name of *Saurauia Comitis-Rossei* is reported by Reko to be "mameyito." In southern Mexico, this name refers to a number of species of *Saurauia* and other genera with small, edible fruits.

At the request of the collector, I have named *Saurauia Comitis-Rossei* in honor of the Earl of Rosse in recognition of his active and enthusiastic interest in Mexican horticulture.

MEXICO: Estado de Oaxaca, Distrito de Juquila, Pochutla, Cafetal de San Antonio, 1700 meters altitude, February 1941, B. P. Reko 6183 (TYPE in Herb. Gray).

EXPLANATION OF THE ILLUSTRATION

PLATE XIX. SAURAUIA COMITIS-ROSSEI *R. E. Schultes*.
1, plant, one half natural size. 2, flower, twice natural size. 3, petal, three times natural size. 4, sepal, three times natural size. 5, sepal, inside view, three times natural size. 6, sepal, outside view, three times natural size.

Drawn by GORDON W. DILLON

SAURAUIA

Comitis-Rossei

R. E. Schultes



